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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,418	06/04/1999	KATSUAKI YAMANOI	Q54672	2787

7590

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EXAMINER

CHU, KIM KWOK

ART UNIT

PAPER NUMBER

2653

DATE MAILED: 04/15/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/325,418

Applicant(s)

YAMANOI ET AL.

Examiner

Kim-Kwok CHU

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13 is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 June 1999 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Drawings

1. The drawings are objected to because Figure 6 is not designated by a legend such as "Prior Art". The legend is necessary in order to clarify what applicant's invention is. See MPEP 608.02(g). Correction is required.

Claim Objections

2. Claims 2, 3 and 6 are objected to because of the following informalities:

(a) in claim 2, line 9, the term "the decision" should be changed to --the decision means--;

(b) in claim 3, line 9, the term "at least a second recording location" should be changed to --at a second recording location--; and

(c) in claim 6, lines 5 and 6 is redundant as in claim 2; Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 7 is rejected under 35 U.S.C. § 112, second

paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

(a) in claim 7, the features "a third storage means" and "a second storage means" is not clear because a first storage means is not claimed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (U.S. Patent 5,859,815) in view of Furukawa et al. (U.S. Patent 5,315,578).

Inoue teaches an optical recording unit very similar to the instant invention. For example, Inoue teaches the following:

(a) as in claim 1, a memory 35 for firstly storing data (Fig. 6; column 9, lines 34-39);

(b) as in claim 1, a record medium 1 for recording the data stored in the memory 35 (Fig. 6); and

(c) as in claim 1, a decision mean 37, 36 and 20 for determining one valid data among the recorded data recorded in the different areas (Fig. 6; decoding circuit 36 and 37 will recover valid/proper data).

However, Inoue does not teach the following:

(a) as in claim 1, the data being recorded in at least two different areas on the record medium.

Furukawa teaches a disc recording medium where data is repeatedly recorded in different area 116 and 118 (Figs. 1 and 2a).

To prevent error, Furukawa illustrates that a conventional recording unit records data twice (column 1, lines 16-25). Since data error caused by scratch, dust and bad sector etc. might occur in any recording medium such as Inoue's, it would have been obvious to one of ordinary skill in the art at the time of invention to use a conventional recording format as taught by Furukawa where the same data is repeatedly recorded twice, because the same data can be access from a different location even if the first data is fail to read properly.

7. Claims 2-5, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue (U.S. Patent 5,859,815) in view of Furukawa et al. (U.S. Patent 5,315,578).

Inoue teaches an optical recording unit very similar to the instant invention. For example, Inoue teaches the following:

- (a) as in claim 2, a memory 35 for firstly storing data (Fig. 6);
- (b) as in claim 2, a record medium 1 for intermittently recording the stored data in the memory 35 (Fig. 6);
- (c) as in claim 2, a record means 4 for recording the data on the record medium 1 (Fig. 6); and
- (d) as in claim 2, a valid-data decision means mean 37, 36 and 20 for determining whether the recorded data is valid (Fig. 6; decoding circuit 36, 37 and 20 will decide and recover a valid/non-error data);
- (e) as in claim 2, the decision determines one valid data among the recorded data of the different areas (Fig. 6; decoding circuit 36, 37 and 20 will decide and recover a valid/non-error data among different locations);
- (f) as in claim 3, a record control means 20 for controlling the record means 4, wherein the record control means 20 provides a control command for the record means 4 to record a predetermined quantity of data stored in the memory 35

at a first recording location on the record medium 1 and also provides a control command for the record means 4 to read the predetermined quantity of data at a second recording location different from the first recording location after the predetermined quantity of data is recorded at the first recording location (Fig. 6; inherent feature where certain amount of data being recorded at certain locations and certain amount of data being accessed at a different locations is a necessary requirement for a typical recording unit); and

(g) as in claim 4, a blank area search means for searching a blank area on the record medium 1, wherein the first recording location has a predetermined address of a blank area searched by the blank area search means, and the second recording location has an address different from the predetermined address of the searched blank area (Fig. 6; blank area on the record medium is a non-recorded block/zone. Therefore, searching addresses of blocks/zones which are not yet occupied is a necessary requirement for a typical recording process).

(h) as in claim 5, a data update means 20 and 5 for updating data address information recorded in a control area (table of contents, U-TOC) on the record medium for controlling data addresses, wherein the data update means updates a data

address of which data has been decided to be valid by the valid-data decision means (Fig. 3; column 3, lines 34-44); and

(i) as in claim 8, the data update means updates a data address in a control area on said record medium so that the data address becomes blank when said valid-data decision means has determined that data corresponding to the data address is not valid (Fig. 3; column 3, lines 34-44; a defective area's address is slip).

However, Inoue does not teach the following:

(a) as in claim 2, the record means records the data in at least two different areas on the record medium;

(b) as in claim 9, the record means continues recording into the first recording location until the remaining data quantity in the memory reaches a predetermined quantity, and continues recording into the second recording location until the record means has recorded data originally identical with the data that has been recorded into the first recording location.

Furukawa teaches a disc recording medium where data is repeatedly recorded in different area 116 and 118 as in above claims 2 and 9 (Figs. 1 and 2a).

To prevent error, Furukawa illustrates that a conventional recording unit records data twice (column 1, lines 16-25). Since data error caused by scratch, dust and bad sector etc.

might occur in any recording medium such as Inoue's, it would have been obvious to one of ordinary skill in the art at the time of invention to use a conventional recording format as taught by Furukawa where the same data is repeatedly recorded twice, because the same data can be access from a different location even if the first data is fail to read properly.

Allowable Subject Matter

8. Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. Claims 10-13 are allowable over prior art.

11. The following is an Examiner's statement of reasons for the indication of allowable subject matter:

As in claim 6, the prior art of record fails to teach or fairly suggest a recording unit having a first storage means for storing a first flag indicating the occurrence of a

vibration in relation to a predetermined address when a vibration detection mean has detected vibration during a data recording operation at the predetermined address, and a second storage means for storing a second flag in relation to another predetermined address so as to indicate that the valid-data decision means has determined that desired data is not recorded at the another predetermined address on the record medium.

As in claim 7, the prior art of record fails to teach or fairly suggest a recording unit having a third storage means for storing a third flag indicating the occurrence of a vibration in relation to a predetermined address during a data recording operation at the predetermined address when the servo condition detection means has detected that the at least one error signal has reached the threshold, a second storage means for storing a second flag corresponding to a predetermined address so as to indicate that the record-data decision means has determined that data is correctly recorded at the predetermined address on the record medium.

As in claims 10 and 11, the prior art of record fails to teach or fairly suggest a recording method having the following steps:

(a) a first recording step for recording a predetermined quantity of first data at a first recording location on a record medium;

(b) a second recording step for recording the first data at one or more locations different from the first recording location on the record medium;

(c) a third recording step for recording a predetermined quantity of the second data stored in the memory at a third recording location adjacent to the first recording location on the record medium;

(d) a fourth recording step for recording the second data at one or more recording locations adjacent to the recording location in which the first data has been recorded on the record medium in the second recording step, the first to fourth recording steps being repeated to record data stored in said memory on the record medium; and

(e) a valid-data decision step for determining one valid data among two or more originally identical data recorded in different locations on the record medium based on a result of a vibration detection step during recording of the two or more identical data.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yamamuro (5,982,729) is pertinent because Yamamuro teaches an optical disk device and replacement processing method.

Ishibashi et al. (5,793,727) is pertinent because Ishibashi teaches a non-volatile memory for storing data to be written into a defective block.

Yokota et al. (5,668,789) is pertinent because Yokota teaches a recording method having a signal level decision means.

Ohmori et al. (5,408,478) is pertinent because Ohmori teaches a recording apparatus with reduced error correction anomalies at linking portions.

Ishiwata et al. (5,291,467) is pertinent because Ishiwata teaches a disc recording apparatus having a shock sensor.

13. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks Washington, D.C.
20231 Or faxed to:

(703) 872-9314 (for formal communications intended for
entry. Or:

(703) 746-6909, (for informal or draft communications,
please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park
II, 2021 Crystal Drive, Arlington. VA., Sixth Floor
(Receptionist).

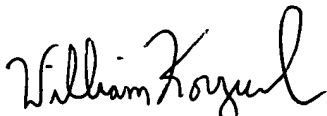
Any inquiry of a general nature or relating to the status
of this application should be directed to the Group
receptionist whose telephone number is (703) 305-4700.

Any inquiry concerning this communication or earlier
communications from the examiner should be directed to Kim CHU
whose telephone number is (703) 305-3032 between 9:30 am to
6:00 pm, Monday to Friday.

KL 4/8/02

Kim-Kwok CHU
Examiner AU2653
April 8, 2002

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